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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,189	10/03/2003	Luc Van Autryve	008764	9509
44257	7590	12/19/2005		
PATTERSON & SHERIDAN, LLP 3040 POST OAK BOULEVARD, SUITE 1500 HOUSTON, TX 77056			EXAMINER LEE, HSIEN MING	
			ART UNIT 2823	PAPER NUMBER

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H:A

Office Action Summary	Application No. 10/679,189	Applicant(s) AUTRYVE ET AL.	
	Examiner Hsien-ming Lee	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8, 10, 15-27, 30, 31 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 15-27, 30 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4, 6-8 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

HSIEN-MING LEE
PRIMARY EXAMINER

12/13/05

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

1. Applicant's cancellation to claims 5, 9, 11-14, 28-29 and 32-35 is acknowledged. Claims 1-4, 6-8, 10, 15-27, 30, 31 and 36 are pending the application. The Final rejection has been withdrawn. The indication of allowable subject matter with respect to claims 1-3 has been withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi et al. (US 5,599,590).

Hayashi et al. teach a method of processing a substrate, comprising:

- depositing a layer comprising amorphous carbon on the substrate (col. 2, lines 5, 6 and 15); , wherein the substrate comprises a magnetic recording material (col. 3, lines 11-12); and then
- laser annealing the substrate using CO₂ laser (col. 4, lines 48-50 and 63), wherein the laser annealing comprises scanning the substrate with a line of continuous wave electromagnetic radiation (col. 5, lines 9-10).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. in view of Sandhu et al. (US 2005/0056940).

In claim 2, Hayashi et al do not teach that the amorphous carbon is deposited by plasma enhanced chemical vapor deposition (PECVD) .

However, using PECVD for depositing the amorphous carbon layer has been widely used in the art, as evidenced by Sandhu et al. (paragraph [0017]).

Therefore, it would have been obvious to one of the ordinary skill in the art, at the time of the invention was made, to use PECVD, as taught by Sandhu et al., for forming the amorphous carbon of Hayashi et al, since PECVD a good candidate for depositing amorphous carbon.

In re claim 3, Sandhu et al. also remedy the deficiency in Hayashi et al because Sanduhu et al. teach using C_3H_6 as the source gas (paragraph [0018]) for depositing amorphous carbon.

Allowable Subject Matter

6. Claims 4, 6-8, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 10, 15-27, 30 and 31 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither teaches nor suggests that the layer comprises amorphous carbon and *nitrogen*, implanting dopant ions into the substrate before depositing the amorphous carbon; and forming a gate source area and gate drain area in the substrate before the implanting.

Response to Arguments

9. Applicant's arguments filed 11/30/2005 have been fully considered and are persuasive. Therefore, the Final rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made, as stated previously.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hsien-ming Lee whose telephone number is 571-272-1863. The examiner can normally be reached on Tuesday-Thursday (7:30 ~ 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hsien-ming Lee
Primary Examiner
Art Unit 2823

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Dec. 13, 2005

HSIEN-MING LEE
PRIMARY EXAMINER

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